CLAIM AMENDMENTS:

Claims 1 to 32 (cancelled)

33. (previously presented) A multiple blade collimator device for collimating a beam of high-energy radiation emanating from a substantially point-like radiation source for irradiation of a treatment object and for stereotactic conformation radio therapy of tumors, the collimator device containing a plurality of opposing collimator blades from radiation-absorbing material which can be positioned into an optical path of the radiation to define arbitrary collimator shapes, the collimator device comprising:

rear blade parts;
front blade parts, each front blade part being linked to one associated rear blade part to form one collimator blade and in such a fashion that substantially no gap is generated in a volume of the radiation-absorbing material, each front blade part having a front edge;
means for linearly displacing each of said rear blade parts towards and away from a central axis of the radiation beam; and
means for adjusting each of said front blade parts in dependence on a position of a respective rear blade part to which said front blade part is linked such that said front edge is always parallel to the optical path of the radiation.

34. (previously presented) The collimator device of claim 33, wherein at least one of said linear displacement means and said adjusting means comprise a forced mechanical coupling between all positions of said rear parts and of said respective front parts to align said front edges.

35. (previously presented) The collimator device of claim 33, wherein said front parts are substantially semi-circular bodies which are securely disposed in corresponding recesses at a front end of said rear parts, wherein said adjusting means generate a pivoting motion about an imaginary axis of rotation lying in a circular center of said semi-circular body.

36. (previously presented) The collimator of claim 35, wherein a height of said rear part substantially corresponds to a diameter of said semi-circular body, wherein front ends of said rear parts are set back to allow all required inclined positions of said front edges of said front blade parts.

37. (previously presented) The collimator of claim 33, wherein cross-sections of said front parts and said rear parts have an asymmetrical trapezoidal shape such that side surfaces thereof extend approximately parallel to the optical path, and further comprising limitations within which the front and rear blade parts are mounted, wherein said limitations have inner surfaces bordering outer collimator blades which extend at an inclined angle to abut these outer collimator blades without leaving gaps.

38. (previously presented) The collimator device of claim 37, wherein said front parts have sufficient lateral play to permit adjustment, despite their trapezoidal shapes.

39. (previously presented) The collimator device of claim 33, wherein said front edges can be displaced beyond a center line of a possible collimator opening.

40. (previously presented) The collimator device of claim 33, wherein each collimator blade comprises an individual displacing means and an individual adjusting means each of which can be individually controlled.

41. (previously presented) The collimator device of claim 33, further comprising a computer communicating with at least one of said displacing means and said adjusting means to adjust a contour and position of a collimator opening with respect to the radiation object in a respective direction of radiation, wherein said computer obtains adjustment data from a device for detecting a shape of the radiation object and further comprising a control means to examine a result of said contour adjustment.

42. (previously presented) The collimator device of claim 33, further comprising a collimator block in which said collimator blades are disposed for positioning a collimator opening relative to the radiation object and the radiation source.

43. (previously presented) The collimator device of claim 42, further comprising a gantry on which said collimator block is disposed, said gantry effecting relative motion between said collimator block and a patient such that the patient can be exposed to radiation from all sides, wherein a collimator opening is adjusted to the shape of the radiation object.

44. (previously presented) The collimator device of claim 34, wherein said forced coupling between said linear displacing means for said rear parts of said collimator blades and the adjusting means for said front parts is effected via transmissions.

45. (previously presented) The collimator device of claim 44, wherein said transmissions for said collimator blades are disposed alternately above, for one collimator blade, and below, for a neighboring collimator blade.

46. (previously presented) The collimator device of claim 44, wherein said adjusting mean for said front parts is designed to align said front edges with respect to the radiation source in response to an individual adjustment of said respective collimator blade as well as in response to an adjustment of at least some of said collimator blades.

47. (previously presented) The collimator device of claim 44, wherein said rear part has a collimator toothed rack into which a driving toothed gear engages.

48. (previously presented) The collimator device of claim 47, wherein said collimator toothed rack associated with said rear part is designed as gearing in a longitudinal edge of said rear part.

49. (previously presented) The collimator device of claim 48, further comprising a collimator block in which said collimator blades are disposed, wherein in a region of said gearing in said longitudinal edge, an adjacent rear part is vertically displaced in said collimator block such that, above said gearing, a guiding element which is connected to a side of said collimator block engages in a guiding groove of said rear part.

50. (previously presented) The collimator device of claim 47, wherein said adjusting means comprise a front edge toothed rack linked to said front part outside of an axis of rotation thereof into which a toothed wheel engages to effect an adjustment path for said front part which differs than an adjustment path of said rear part for aligning said front edge.

51. (previously presented) The collimator device of claim 50, wherein said collimator toothed rack and said front edge toothed rack are disposed at a longitudinal edge of said rear part and have different subdivisions for obtaining different adjustment paths, wherein a toothed wheel engages both toothed racks with a subdivision difference lying within gearing tolerance limits.

52. (currently amended) The collimator device of claim 51, ~~wherein~~ wherein a subdivision of said front edge toothed rack, disposed

below a collimator blade, is larger than a subdivision of said collimator toothed rack.

53. (previously presented) The collimator device of claim 51, wherein a subdivision of said front edge toothed rack, disposed above said collimator blade, is smaller than a subdivision of said collimator toothed rack.

54. (previously presented) The collimator device of claim 50, further comprising a base frame in which said toothed wheel is disposed.

55. (previously presented) The collimator device of claim 50, further comprising a collimator block in which said collimator blades are disposed, wherein said toothed wheel is disposed in said collimator block to simultaneously serve as a driving toothed wheel.

56. (previously presented) The collimator device of claim 51, further comprising a collimator block in which said collimator blades are disposed and a base frame supporting said collimator block, wherein said toothed wheel is disposed in a displaceable collimator block and further comprising an additional toothed wheel engaging said collimator toothed rack and said front edge toothed rack and disposed on said base frame for displacing said collimator block relative to said base frame.

57. (previously presented) The collimator device of claim 46, wherein said adjusting means comprise a link member.

58. (previously presented) The collimator of claim 57, wherein said link member comprises a connecting link guide rigidly cooperating with a bearing of a driving toothed wheel and a link guide slider cooperating with said front part.

59. (previously presented) The collimator of claim 58, further comprising a base frame and displaceable collimator block halves rigidly connected to the bearings of driving toothed wheels, wherein each block half accommodates one group of said collimator blades and wherein said connecting link guide is rigidly connected to said base frame.

60. (previously presented) The collimator of claim 58, further comprising a cable control mounted to said slider, guided towards said front part, and mounted at one end above an imaginary axis of rotation and at an other end below an imaginary axis of rotation of said front part.

61. (previously presented) The collimator device of claim 58, wherein said link member comprises a double-armed lever having a rear end to which said slider is mounted, wherein said lever is disposed with a rotation axle on said rear part and with a front end on a rear region of said front part.

62. (previously presented) The collimator of claim 33, wherein at least one longitudinal edge of said rear part has a guide.

63. (previously presented) The collimator of claim 62, further comprising a collimator block in which said collimator blades are disposed, wherein said guide is a groove in said longitudinal edge in which a guiding element, cooperating with or integral with said collimator block, slides.

64. (previously presented) The collimator of claim 33, wherein said displacing means function as compensating means for generating different radiation intensities via temporary insertion of collimator blades into a collimator opening during irradiation.